

09/884,429 filed 06/18/2001

David Chazan, et al.

Reply to Final Office Action of 10/25/2006

**REMARKS/ARGUMENTS**

Claims 13, 28-31, 33-77, and 79-81 are pending in the above-captioned application. All of these claims stand rejected. With this paper, Applicants have amended claims 13, 29, 79, and 81. No new matter was added with the amendments.

**I. Claim rejections under 35 U.S.C. § 112, second paragraph**

Claims 13, 79, and 81 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention.

The Examiner objected to the phrase "any other components" on the basis that claims 13 and 81 specifically name only at least one venting element/venting channel network. The Examiner is correct that Applicants intend that other components be present along with the venting element/venting channel network. To provide clarification, Applicants have amended claim 13 to recite "a plurality of components disposed therein or at least partially therethrough," the plurality of components including at least one venting element. Claim 81 has been amended to recite "a plurality of components disposed therein," the plurality of components including at least one venting channel network. Support for a plurality of components, the components including at least one venting element, can be found in Figure 3, which shows a plurality of components, these components including microchannel 302 and port 304 as well as venting cavities 306. Support for a plurality of components, the components including at least one venting channel network, can be found in Figure 2, which shows a plurality of components, these components including microchannel 202 and port 204 as well as first and second venting channel networks "disposed substantially parallel to microchannel 202 ...." See the application, page 13, lines 4-7. Thus, no new matter has been added with the amendments.

Claim 13 has also been amended, as requested by the Examiner, to recite "the at least one venting element" to clarify that Applicants are referring to the same element.

With regard to claim 79, the Examiner pointed out that claim 29, from which claim 79 depends, recites a venting channel rather than a venting element. Applicants thank the Examiner for pointing out this error. Claim 79 has been corrected to depend from claim 13, which recites a venting element.

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Applicants respectfully submit that, with the above amendments, claims 13, 79, and 81 meet the requirements of 35 U.S.C. § 112, second paragraph.

**II. Claim rejections under 35 U.S.C. § 112, first paragraph**

Claims 28, 30, 31, 79, and 80 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner pointed out that claim 29, from which these claims depend, recites a venting channel and observed that there is no support for a venting channel including a plurality of venting cavities. As previously mentioned, claim 79, from which claims 28, 30, 31, and 80 depend, has been corrected to depend from claim 13, which recites a venting element rather than a venting channel. Applicants respectfully submit that, with this amendment, claims 28, 30, 31, 79, and 80 meet the requirements of 35 U.S.C. § 112, first paragraph.

**III. Claim rejection under 35 U.S.C. § 102(e) as being anticipated by Pfof et al. (US 6,485,690)**

Claim 13 was rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Pfof et al. (US 6,485,690). This rejection is respectfully traversed. "[F]or anticipation under 35 U.S.C. § 102, a single reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present." MPEP § 706.02. "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, USPQ2d 1913, 1920 (Fed. Cir. 1989).

At a minimum, Pfof et al. do not teach a fabrication element comprising a body structure having at least one venting element "not in fluid communication with any other component disposed on or through the first and second substrates." The Examiner has read Applicants' venting element on apertures 20 of Pfof et al., stating that at least one of these apertures is not in fluid communication with any other component disposed on or through first and second substrates. This is not supported by the text of the reference. As stated by Pfof et al. in column 5, lines 63-66, apertures 20 "are selectively positioned immediately above channels 22 in the middle or fluidic layer 14 and in communication with fluidic inlets in layer 14." Thus,

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apertures 20, which are disposed through first substrate 12, are in fluid communication with channels 22 disposed on second substrate 14. Further, Pfoet et al. state in column 6, lines 1-5, "A series of micro-sized channels formed or positioned in the middle or bottom surface of the top layer or plate 12 convey the materials (e.g. liquids) from the apertures 20 to positions above selected openings 22 and 24 in the middle layer [14]." Thus, apertures 20 are not only in fluid communication with components in middle layer 14 (the "second substrate"), but are also in fluid communication with components in top layer 12 (the "first layer").

Thus, Pfoet et al. do not teach every aspect of the claimed invention either explicitly or impliedly, nor do they show the identical invention claimed by Applicants in as complete detail as is contained in independent claim 13. Withdrawal of the rejection of claim 13 under U.S.C. § 102(e) as being anticipated by Pfoet et al. is, therefore, respectfully requested.

**IV. Claim rejections under 35 U.S.C. § 102(e) as being anticipated by Borrelli et al. (US 6,596,237)**

Claims 29, 33-36, 42, 45, 79, and 81 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Borrelli et al. (US 6,596,237). This rejection is respectfully traversed.

With regard to amended independent claim 29, at a minimum, Borrelli et al. do not teach a "microchannel network comprising a plurality of microchannels, at least two of which microchannels intersect, the venting channel disposed along at least a portion of a side of one or more of the microchannels such that it does not intersect with any microchannel in the microchannel network." The underlined limitation has been added to more particularly point out and distinctly claim Applicants' invention. Support for the limitation can be found in Figures 2A and 2B, which show a microchannel network having microchannels that intersect. For example, if the Examiner follows channel 202 in Figure 2B, he will see that this channel is intersected by a second channel at the lower right of the figure. Thus, no new matter has been added by the amendment of the claim.

If any two (or more) of the channels of Borrelli et al. are considered to be part of a microchannel network having intersecting channels, of necessity, each of the remaining channels intersects at least one of the intersecting channels of the microchannel network.

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Therefore, Borrelli et al. do not teach every aspect of the claimed invention either explicitly or impliedly, nor do they show the identical invention claimed by Applicants in as complete detail as is contained in amended independent claim 29. Withdrawal of the rejection of claim 29 under U.S.C. § 102(e) as being anticipated by Borrelli et al. is, therefore, respectfully requested.

Claims 33–36, 42, and 45 depend directly or indirectly from amended independent claim 29. Therefore, Applicants respectfully submit that these dependent claims are allowable for at least the same reasons as set forth herein with respect to amended independent claim 29. Withdrawal of the rejection of dependent claims 33–36, 42, and 45 under § 102(e) as being anticipated by Borrelli et al. is also respectfully requested.

As previously noted, claim 79 has been corrected to depend from claim 13, rather than from claim 29.

Independent claim 81 has been amended to recite intersecting channels in the venting channel network. Support for the limitation can be found in Figures 2A and 2B, which show a venting channel network having channels that intersect. As previously noted, where a network includes intersecting channels, which Applicants wish to point out is inherent in the usual and customary definition of “network,” these channels of necessity intersect with the other channels shown by Borrelli et al. Therefore, withdrawal of the rejection of amended independent claim 81 under § 102(e) as being anticipated by Borrelli et al. is respectfully requested.

V. Claim rejections under 35 U.S.C. § 103(a) as being unpatentable over Borrelli et al. (US 6,596,237)

Claims 28, 30, 31, 37–41, 43, 44, and 80 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Borrelli et al. (US 6,596,237). This rejection is traversed.

To warrant rejection under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the prior art. See MPEP § 2142. As demonstrated above, Borrelli et al. neither teach nor suggest all of the limitations of Applicants' amended independent claim 29. Thus, claim 29 is nonobvious. Claims 37–41, 43, and 44 depend indirectly from amended independent claim 29. Any claim depending from a nonobvious claim is also nonobvious. See MPEP § 2143.03 and *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore,

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dependent claims 37-41, 43, and 44 are nonobvious. Withdrawal of the rejections of these claims as being unpatentable over Borrelli et al. is, therefore, respectfully requested.

The Examiner has not alleged that amended independent claim 13 is unpatentable over Borrelli et al. Therefore, claim 13 is nonobvious over Borrelli et al. As a result of the above-noted correction of the dependence of claim 79, dependent claims 28, 30, 31, and 80 now depend indirectly from claim 13, rather than from claim 29. As any claim depending from a nonobvious claim is also nonobvious, dependent claims 28, 30, 31, and 80 are also nonobvious. Withdrawal of the rejections of these claims as being unpatentable over Borrelli et al. is, therefore, respectfully requested.

**Conclusion**

For the foregoing reasons, Applicants believe all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned attorney.

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